



ENERGY EDGE
strategic energy solutions

“Energy Edge was great to work with. They were able to take technical concepts and present them in a way that was understandable to all of our stakeholders. This was very instrumental in our decision making process.”

Scott Puckett
Energy Manager
NTMWD

COMPANY NAME
North Texas Municipal
Water District

WEBSITE
www.ntmwd.com

LOCATION
Wylie, TX

INDUSTRY
Utilities

Solar Transaction Provides Long-Term Benefits for the North Texas Municipal Water District



OVERVIEW

The North Texas Municipal Water District (the District) provides vital water, wastewater and waste management services to more than nearly two million people in North Texas. Headquartered in Wylie, TX, the District, and its more than 800 employees, serves almost 80 communities including Frisco, Plano, McKinney, Richardson and Garland.

The District consumes 300,000 MWhs of electricity per year within ERCOT's deregulated electricity market. These costs represent a significant portion of the District's annual operating budget and ultimately impact the water prices charged to the communities it serves across North Texas. Accordingly, achieving low and stable costs of electricity year on year are an important goal to the District. This has resulted in the District developing a sophisticated and proactive energy management strategy.

There are three core components to the District's energy management strategy:

1. Maximize financial predictability
2. Minimize price volatility
3. Achieve the lowest practical rates

During the summer of 2019, the District became increasingly concerned about the long-term future of on-peak power prices in ERCOT due to:

- Shrinking reserve margins
- Increased real-time price volatility
- Rising forward on-peak heat rates

The Client's Need

How to buy long-term solar energy while already under a 10-year retail power contract

ENERGY EDGE'S Potential Solutions

- Virtual PPA
- Physical PPA
- Leverage existing supplier solution

The District recognized that a long-term offsite solar PPA offered a unique opportunity to hedge against future on-peak power prices for a variety of reasons. First, solar power can be purchased for a period longer than that of a traditional fossil-based electricity contract (i.e. 10+ years). Second, solar power is fuel agnostic, and its price is not influenced over time by changing fuel prices unlike natural gas fired generation. Finally, solar PPA prices had significantly decreased and become very competitive to forecasted on-peak power prices.

The District, which purchases its electricity from two providers, was two years into a 10-year retail supply agreement and was seeking



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guidance on how to integrate a solar PPA into these existing contracts. ENERGY EDGE was engaged to help the District answer this question.



APPROACH

ENERGY EDGE identified three ways the District could source offsite solar energy:

- A virtual PPA with a third party (i.e. a contract for differences)
- A physical PPA with a solar developer and financially integrate it with the District's existing retail power contracts
- A proprietary renewable solution offered by one of the District's incumbent retail suppliers

After ENERGY EDGE helped the District understand how a virtual PPA worked, they decided this option did not meet their primary criteria of the solar energy serving as a physical hedge against their load. The contract for differences structure created too much financial risk for the District.

ENERGY EDGE then helped the District understand the attributes of a physical PPA including:

- The financial integration of a third-party PPA with their existing retail supply contracts
- RFP process necessary to properly evaluate a project's viability, engineering and economics
- Salient commercial risks that would need to be addressed within the PPA itself
- The need to contract with a qualified scheduling entity (QSE) and the scheduling and settlement interactions required with ERCOT
- The ongoing accounting required to audit ERCOT settlement statements and the internal process associated with allocating the costs of the PPA across the District's various business units

While a physical PPA met the primary criteria of being able to serve as a physical hedge, the complexities associated with the contracting process and ongoing administrative requirements were not something the District wanted to take on if they could be avoided.

Accordingly, ENERGY EDGE requested proposals from the District's two incumbent retail suppliers for incorporating solar energy into the existing electricity contracts. Both suppliers had recently entered into long-term PPAs with different utility scale solar projects in ERCOT, and each supplier was looking to resell this energy to end consumers.

Purchasing solar energy from one of their suppliers was interesting to the District, as it would greatly simplify the procurement process and effectively eliminate the ongoing support work associated



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with a third-party PPA. The benefits to the District of this type of transaction included:

- Due diligence on each project had already been performed by the suppliers
- The project PPAs had already been negotiated by each supplier
- Contracting terms and conditions were similar to a traditional energy purchase
- The District did not have to contract for QSE services or be involved with the operating functions of the solar asset or the ERCOT settlement process
- The cost of the solar energy would be included in their monthly electricity invoices and would require no additional accounting support

20 MW, 15-year solar PPA provided hedge against future on-peak power prices

Sleeving the solar PPA through a retail supplier meaningfully simplified the energy purchase



OUTCOME

After evaluating each supplier's offer and comparing them to the value the District could achieve through a physical PPA, ENERGY EDGE recommended the District focus solely on the offers from their retail suppliers.

While each supplier's offer was similar in nature, there were some differences with respect to commercial terms. ENERGY EDGE helped the District understand and quantify these differences which were then presented to the District's senior leadership along with the overall value proposition associated with purchasing solar energy.

The District ultimately purchased 20MW of solar energy for 15 years through one of its incumbent retail suppliers. This solar purchase will serve as a hedge against future on-peak power prices and will add financial stability to the District's long-term energy management strategy. The District only purchased a solar hedge for a portion of its power needs, with the anticipation of future technological advancements in renewable energy and battery storage which they would seek to incorporate into their energy management strategy.